

8th Annual SECA Workshop

San Antonio, TX – Hyatt Regency

Agenda



Day One

Tuesday, August 7, 2007

7:00-8:00	Registration and Continental Breakfast
8:00- 8:10	Welcome <i>Joseph Strakey</i> , U.S. Department of Energy National Energy Technology Laboratory
8:10-8:50	SECA Overview <i>Wayne Surdoval</i> , U.S. Department of Energy National Energy Technology Laboratory
8:50-9:20	FutureGen Update <i>Joseph Strakey</i> , U.S. Department of Energy National Energy Technology Laboratory
9:20-9:50	SECA Phase I Validation Testing / Coal Gas Impurities <i>Randall Gemmen</i> , U.S. Department of Energy National Energy Technology Laboratory
9:50-10:10	BREAK
10:10-10:40	Panel Discussion / Questions <i>Joe Strakey and Wayne Surdoval</i> , U.S. Department of Energy National Energy Technology Laboratory <i>Gary McVay</i> , Pacific Northwest National Laboratory
10:40-11:25	Gasification Technology Options for SOFC Applications <i>Ronald L. Schoff</i> , Electric Power Research Institute
11:25-12:10	Market Mechanisms for CO₂: Issues and Opportunities <i>Michael Moore</i> , CO2 Global LLC.
12:10-1:10	LUNCH

Industry Team Summary

1:10-2:10	Acumentrics Corporation <i>Norman Bessette, Acumentrics Corporation</i>
2:10-3:10	Cummins Power Generation SECA Phase 1 Review <i>Daniel Norrick, Cummins Power Generation</i>
3:10-3:30	BREAK
3:30-4:30	Development Update on Delphi's Solid Oxide Fuel Cell Systems <i>Steven Shaffer, Delphi</i>
4:30	ADJOURN
6:00pm	Reception

Day Two Wednesday, August 8, 2007

7:00-8:00	Registration and Continental Breakfast
8:00-9:00	SECA Solid Oxide Fuel Cell Program at Fuel Cell Energy <i>Joel Doyon, FuelCell Energy Corporation</i>
9:00-10:00	SECA SOFC Program at GE Global Research <i>Seth Taylor, GE Global Research Center</i>
10:00-10:20	BREAK
10:20-11:20	SECA Program at Siemens <i>Shailesh Vora, Siemens Power Generation</i>
11:20-12:30	LUNCH

SECA Core Technology Program

12:30-12:40	Welcome <i>Prabhakar Singh, Pacific Northwest National Laboratory</i>
12:40-12:50	Introductory Remarks <i>Wayne Surdoval, U.S. Department of Energy</i> National Energy Technology Laboratory
12:50-1:20	Update on SOFC Test Vehicle Development and Implementation <i>Jeff Stevenson, Pacific Northwest National Laboratory</i>

- 1:20-1:50 **Low Cost Bulk Alloy Metallurgy and Manufacturing**
James Rakowski, Allegheny Ludlum
- 1:50-2:20 **Surface Modifications for Oxidation Resistance**
David Alman, U.S. Department of Energy
National Energy Technology Laboratory
- 2:20-2:50 **Low-Cr Fe-Ni Alloys as SOFC Interconnect Material: Alloy Design and Performance Evaluation**
John Zhu, Tennessee Technological University
- 2:50-3:10 BREAK
- 3:10-3:40 **Advanced Interconnect Development at PNNL**
Gary Yang, Pacific Northwest National Laboratory

Design, Simulation and Reliability

(Moderators - Shultz / Khaleel)

- 3:40-4:10 **Characterization of Anode-Interconnect Interfaces**
Edgar LaraCurzio, Oak Ridge National Laboratory
- 4:10-4:40 **Cell and Stack Modeling**
Moe Khaleel, Pacific Northwest National Laboratory
- 4:40-5:10 **ASME Design Basis**
Moe Khaleel, Pacific Northwest National Laboratory
- 5:10 ADJOURN

Day Three

Thursday, August 9, 2007

- 7:00-8:00 **Registration and Continental Breakfast**

Electrodes - Performance and Degradation

(Moderator - Stevenson)

- 8:00- 8:30 **Deconvolution of SOFC Cathode Polarization**
Eric Wachsman, University of Florida
- 8:30- 9:00 **Mechanisms Governing Mixed Conducting SOFC Cathodes**
Stuart Adler, University of Washington
- 9:00-9:30 **Electrode Optimization Studies and Cathode Surface Chemistry**
Paul Salvador, Carnegie Mellon University

9:30-10:00 **Novel and Improved Electrode Structures through Infiltration**
Steven Visco, Lawrence Berkley National Laboratory

10:00-10:20	BREAK
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10:20-10:50 **Electrode Contamination Studies**
Michael Krumpelt, Argonne National Laboratory

10:50-11:20 **High Pressure Electrode Studies**
Larry Pederson, Pacific Northwest National Laboratory

Seals - Materials and Performance (Moderators - Shultz / Singh)

11:20-11:50 **Innovative Seals for Solid Oxide Fuel Cells (SOFC)**
Raj Singh, University of Cincinnati

11:50-12:20 **High Temperature Glass Seals**
Matt Chou, Pacific Northwest National Laboratory

12:20-1:20 LUNCH

1:20-1:50 **Glass Composite Seals**
Ronald Loehman, Sandia National Laboratories

Balance of Plant (Moderators - *Quedenfeld / Singh*)

1:50-2:20 **Power Electronics for Fuel Cell Based Power Generation Systems**
Allen Hefner, NIST

2:20-2:50 **Advances in Anode and Cathode Blowers**
Giri Agrawal, R&D Dynamics Corporation

2:50-3:20 **Anode and Cathode Blower Systems for SOFC's**
Mark Johnson, Phoenix Analysis and Design Technologies

3:20-3:40 BREAK

Coal Contaminants (Moderators - Shultz / Pederson)

3:40-4:10 **SOFC Operation in Hydrogen and Coal Gas in the Presence of Phosphorus, Arsenic and Sulfur Impurities**
Olga Marina, Pacific Northwest National Laboratory

4:10-4:40 **Effect of Coal Contaminants on the SOFC Performance**
Gopala Krishnan, SRI International

4:40-4:45 **Concluding Remarks**
Wayne Surdoyal, U. S. Department of Energy
National Energy Technology Laboratory